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ABSTRACT OF THE DISCLOSURE

This invention discloses novel device structures for full color flat panel displays utilizing pseudomorphically cladded quantum dot nanocrystals. Different colors are obtained by changing the core size and composition of the quantum dots while maintaining a nearly defect-free lattice at the core-cladding interface. Light emission from the quantum dot core is obtained either by injection or by avalanche electroluminescence. A nanotip emitter device is also presented. These generic devices can be addressed using a variety of conventional display drivers, including active and passive matrix configurations.

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